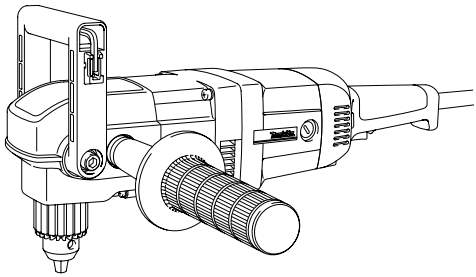
ENGLISH (Original instructions)

INSTRUCTION MANUAL

Angle Drill

DA4030
DA4031



003008

DOUBLE INSULATION

⚠WARNING:
For your personal safety, READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

ENGLISH (Original instructions)

SPECIFICATIONS

Model			DA4030	DA4031	
				High	Low
Capacities	Wood	Auger bit	38 mm	38 mm	
		Self-feed bit	65 mm	65 mm	118 mm
		Hole saw	-----	-----	152 mm
	Steel		13 mm	13 mm	
No load speed (min^{-1})			1,200	1,200	300
Overall length (With an extended spade grip)			417 mm (491 mm)	462 mm (536 mm)	
Net weight			5.5 kg	6.3 kg	
Safety class			⧈/II		

• Due to our continuing programme of research and development, the specifications herein are subject to change without notice.

• Specifications may differ from country to country.

• Weight according to EPTA-Procedure 01/2003

END201-5

Symbols

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.

· Read instruction manual.

· DOUBLE INSULATION

· Only for EU countries
Do not dispose of electric equipment together with household waste material! In observance of European Directive 2002/96/EC on waste electric and electronic equipment and its implementation in accordance with national law, electric equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

ENE032-1

Intended use

The tool is intended for drilling in wood, metal and plastic.

ENF002-1

Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.

For Model DA4031

ENG102-2

For European countries only

Noise

The typical A-weighted noise level determined according to EN60745:

Sound pressure level (L_{pA}) : 87 dB(A)
Sound power level (L_{WA}) : 98 dB(A)
Uncertainty (K) : 3 dB(A)

Wear ear protection

ENG202-3

Vibration

The vibration total value (tri-axial vector sum) determined according to EN60745:

Work mode: drilling into metal
Vibration emission ($a_{h,D}$) : 2.5 m/s^2 or less
Uncertainty (K) : 1.5 m/s^2

ENG901-1

- The declared vibration emission value has been measured in accordance with the standard test method and may be used for comparing one tool with another.
- The declared vibration emission value may also be used in a preliminary assessment of exposure.

⚠WARNING:

- The vibration emission during actual use of the power tool can differ from the declared emission value depending on the ways in which the tool is used.
- Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

ENH101-12

EC Declaration of Conformity

We Makita Corporation as the responsible manufacturer declare that the following Makita machine(s):

Designation of Machine:
Angle Drill

Model No./ Type: DA4031
are of series production and

Conforms to the following European Directives:

98/37/EC until 28th December 2009 and then with 2006/42/EC from 29th December 2009

And are manufactured in accordance with the following standards or standardised documents:

EN60745

The technical documentation is kept by our authorised representative in Europe who is:

Makita International Europe Ltd,
Michigan, Drive, Tongwell,
Milton Keynes, MK15 8JD, England

30th January 2009

000230

Tomoyasu Kato
Director
Makita Corporation
3-11-8, Sumiyoshi-cho,
Anjo, Aichi, JAPAN

GEA005-2

General Power Tool Safety Warnings

⚠ **WARNING Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
5. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
8. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
9. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

Personal safety

10. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
11. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
12. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
13. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
14. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
15. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves**

away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

16. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

17. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
18. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
19. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
20. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
21. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
22. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
23. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

24. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
25. **Follow instruction for lubricating and changing accessories.**
26. **Keep handles dry, clean and free from oil and grease.**

GEB001-5

DRILL SAFETY WARNINGS

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. If you use this power tool unsafely or incorrectly, you can suffer serious personal injury.

1. **Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.
2. **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
3. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
4. **Hold the tool firmly.**
5. **Keep hands away from rotating parts.**
6. **Do not leave the tool running. Operate the tool only when hand-held.**
7. **Do not touch the drill bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**
8. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**

SAVE THESE INSTRUCTIONS.

⚠WARNING:

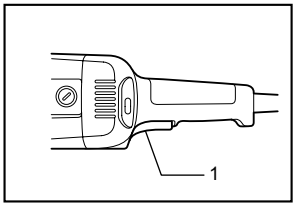
MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

FUNCTIONAL DESCRIPTION

⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

Switch action



1. Switch trigger

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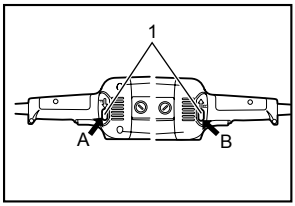
⚠CAUTION:

- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

To start the tool, simply pull the switch trigger. Release the switch trigger to stop.

Reversing switch action



1. Reversing switch lever

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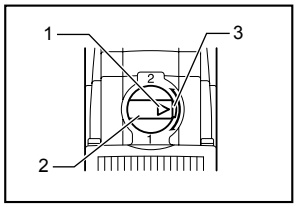
This tool has a reversing switch to change the direction of rotation. Depress the reversing switch lever from the A side for clockwise rotation or from the B side for counterclockwise rotation.

⚠CAUTION:

- Always check the rotational direction before operation.
- Use the reversing switch only after the tool comes to a complete stop. It will damage the tool to change the rotational direction before the tool stops.

Speed change

For Model DA4031 only



1. Pointer
2. Speed change knob
3. Lock button

003031

Two speed ranges can be preselected with the speed change knob.

To change the speed, depress the lock button and turn the speed change knob so that the pointer points to the position 1 for low speed or the position 2 for high speed.

⚠CAUTION:

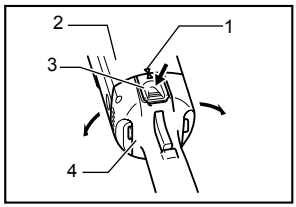
- Use the speed change knob only after the tool comes to a complete stop. Changing the tool speed before the tool stops may damage the tool.
- Always set the speed change knob carefully into the correct position. If you operate the tool with the speed change knob positioned halfway between the position 1 and the position 2, the tool may be damaged.

Torque limiter

For Model DA4031 only

The torque limiter will actuate when a certain torque level is reached (for lower speed setting: position 1). The motor will disengage from the output shaft. When this happens, the bit will stop turning.

Switch handle mounting positions



1. Mark
2. Motor housing
3. Lock button
4. Handle

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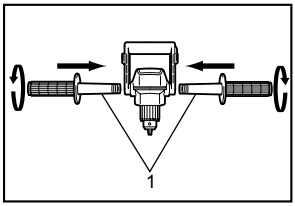
The switch handle can be rotated to either 90° left or right to fit your work needs. First, unplug the tool. Press the lock button and rotate the switch handle until the △ mark on the lock button is aligned with that on the motor housing. The switch handle will be locked in that position.

ASSEMBLY

⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Installing side grip (auxiliary handle)



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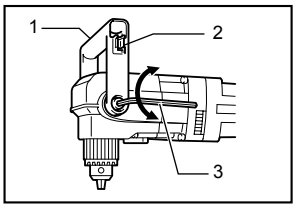
1. Side grip

⚠CAUTION:

- Always be sure that the side grip is installed securely before operation.

Screw the side grip on the tool securely. The side grip can be installed on either side of the tool, whichever is convenient.

Spade grip



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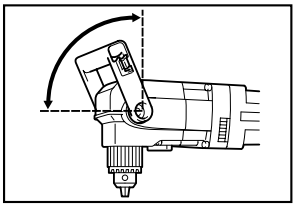
1. Spade grip
2. Wrench holder
3. Hex wrench



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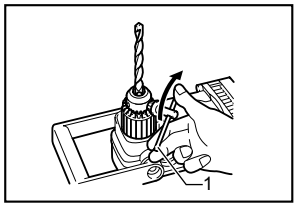
The spade grip can be installed in any position as shown in the figure. To change the position, loosen the hex bolts (both sides) with a hex wrench and turn the spade grip to the desired position. Then tighten the hex bolts securely. After reposition the grip, return the hex wrench to the wrench holder.

⚠CAUTION:

- Do not fix the spade grip beyond the limits of the arrow. Be cautious that your hand is not caught in the grip. Keep the hand away from the drill chuck. They can lead to serious accidents.
- Always be sure that the hex bolts (both sides) of the spade grip are tightened securely.

Installing or removing drill bit



003054

1. Chuck key

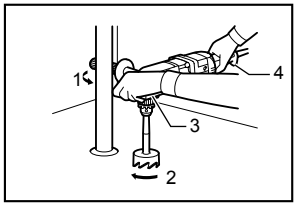
To install the bit, place it in the chuck as far as it will go. Tighten the chuck by hand. Place the chuck key in each of the three holes and tighten clockwise. Be sure to tighten all three chuck holes evenly.

To remove the bit, turn the chuck key counterclockwise in just one hole, then loosen the chuck by hand.

After using the chuck key, be sure to return to the original position.

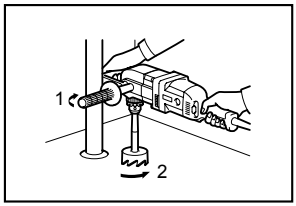
OPERATION

Holding tool



003078

1. Reaction
2. Forward
3. Spade grip
4. Handle



003079

1. Reaction
2. Reverse

⚠CAUTION:

- This is a powerful tool. High torque is developed and it is important that the tool should be securely held and properly braced.

Grasp the switch handle with one hand and the spade grip with the other hand. When drilling a large hole with a self-feed bit, etc., the side grip (auxiliary handle) should be used as a brace to maintain safe control of the tool.
When drilling action is forward (clockwise), the tool should be braced to prevent a counterclockwise reaction if the bit should bind. When reversing, brace the tool to prevent a clockwise reaction. If the bit must be removed from a partially drilled hole, be sure the tool is properly braced before reversing.

Drilling operation

Drilling in wood

When drilling in wood, the best results are obtained with wood drills equipped with a guide screw. The guide screw makes drilling easier by pulling the bit into the workpiece.

Drilling in metal

To prevent the bit from slipping when starting a hole, make an indentation with a center-punch and hammer at the point to be drilled. Place the point of the bit in the indentation and start drilling.
Use a cutting lubricant when drilling metals. The exceptions are iron and brass which should be drilled dry.

⚠CAUTION:

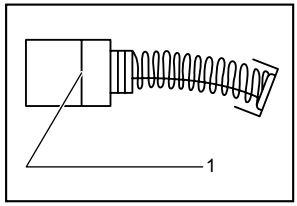
- Pressing excessively on the tool will not speed up the drilling. In fact, this excessive pressure will only serve to damage the tip of your bit, decrease the tool performance and shorten the service life of the tool.
- There is a tremendous twisting force exerted on the tool/bit at the time of hole breakthrough. Hold the tool firmly and exert care when the bit begins to break through the workpiece.
- A stuck bit can be removed simply by setting the reversing switch to reverse rotation in order to back out. However, the tool may back out abruptly if you do not hold it firmly.
- Always secure small workpieces in a vise or similar hold-down device.
- Avoid drilling in material that you suspect contains hidden nails or other things that may cause the bit to bind or break.

MAINTENANCE

⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

Replacing carbon brushes



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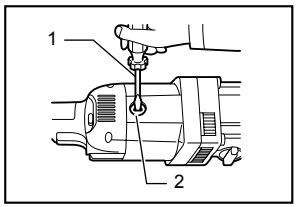
1. Limit mark

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.
Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.



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1. Screwdriver
2. Brush holder cap

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

ACCESSORIES

⚠CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Drill bits
- Chuck key
- Hex wrench
- Plastic carrying case

Makita Corporation Anjo, Aichi, Japan

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